

CLAIMS

What is claimed is:

1. A prosthetic implant comprising:
  - a femoral component operable to replace at least a portion of a patient's natural femur;
  - a tibial component operable to replace at least a portion of a patient's natural tibia, said tibial component having a superior tibial component surface; and
  - a bearing operable to provide engagement between said femoral component and said tibial component having:
    - a superior bearing surface operable to articulate with said femoral component; and
    - an inferior bearing surface operable to cooperate with said superior tibial component surface;
  - a wear reduction device located at at least one of said superior tibial component surface and said inferior bearing surface and operable to reduce wear upon at least one of said superior tibial component surface and said inferior bearing surface.
2. The implant of Claim 1, wherein said bearing is fixed relative to said tibial component.

3. The implant of Claim 1, wherein said bearing is movable relative to said tibial component in a medial to lateral direction.

4. The implant of Claim 1, wherein said bearing is movable relative to said tibial component in an anterior to posterior direction.

5. The implant of Claim 1, wherein said bearing is operable to move in a rotational direction relative to said tibial component.

6. The implant of Claim 1, wherein said superior tibial component is planar.

7. The implant of Claim 1, wherein said superior tibial component surface is at least one of a concave or a convex surface.

8. The implant of Claim 1, wherein said wear reduction device is a ceramic insert.

9. The implant of Claim 2, wherein said ceramic insert is at least one of zirconia and alumina.

10. The implant of Claim 1, wherein said wear reduction device is at least one of said superior tibial component surface and said inferior bearing surface having oxygen and nitrogen diffused within.

11. The implant of Claim 1, wherein said wear reduction device is at least one of said superior tibial component surface and said inferior bearing surface having an oxidizable alloy that is converted to an oxide.

12. The implant of Claim 11, wherein said oxidizable alloy is at least one of a titanium hafnium, a titanium zirconium, and a zirconium hafnium.

13. The implant of Claim 1, wherein said wear reduction device is provided by at least one of said superior tibial component surface and said inferior bearing surface that is nitrided.

14. The implant of Claim 13, wherein at least one of said nitrided superior tibial component surface and said nitrided inferior bearing surface is provided by at least one of PVD coating, plasma source ion implantation, and ion nitriding.

15. The implant of Claim 1, wherein said wear reduction device is provided by at least one of said superior tibial component surface and said inferior bearing surface that is anodized.

16. The implant of Claim 15, wherein said wear reduction device is provided by at least one of said superior tibial component surface and said inferior bearing surface anodized using a conversion coating.

17. The implant of Claim 1, wherein said wear reduction device is provided by at least one of said superior tibial component surface and said inferior bearing surface that is burnished to provide a work hardened zone.

18. The implant of Claim 17, wherein as least one of said superior tibial component surface and said inferior bearing surface is further treated with at least one of CO, CR, MO, and Ti-6-4.

19. A prosthetic tibial implant comprising:
  - a tibial plate operable to replace at least a portion of a patient's tibia having:
    - a superior surface;
    - an inferior surface opposite said superior surface;
    - a bearing engagement surface located at said superior surface; and
    - a wear reduction device located at said superior surface;
    - a stem extending from said inferior surface.
20. The implant of Claim 19, wherein said superior surface is planar.
21. The implant of Claim 19, wherein said superior surface is curved.
22. The implant of Claim 19, wherein said wear reduction device is a ceramic insert.
23. The implant of Claim 22, wherein said ceramic insert is at least one of zirconia and alumina.
24. The implant of Claim 19, wherein said wear reduction device is said superior surface having oxygen and nitrogen diffused within.

25. The implant of Claim 19, wherein said wear reduction device is said superior surface having an oxidizable alloy converted to an oxide.

26. The implant of Claim 25, wherein said oxidizable alloy is at least one of a titanium hafnium, a titanium zirconium, and a zirconium hafnium

27. The implant of Claim 19, wherein said wear reduction device is said superior surface that is nitrided.

28. The implant of Claim 27, wherein said wear reduction device is said superior surface nitrided by at least one of PVD coating, plasma source ion implantation, and ion nitriding.

29. The implant of Claim 19, wherein said wear reduction device is said superior surface that is anodized.

30. The implant of Claim 29, wherein said wear reduction device is said superior surface anodized using a conversion coating.

31. The implant of Claim 19, wherein said wear reduction device is said superior surface burnished to provide a work hardened zone.

32. The implant of Claim 31, wherein said wear reduction device is said superior surface treated with at least one of CO, CR, MO, and Ti-6-4.

33. A prosthetic implant comprising:

- a first member;
- a second member engaging said first member; and
- a wear reduction device provided on at least one of said first member and said second member to reduce wear of said first member and said second member.

34. The implant of Claim 33, wherein said first member is a tibial component operable to replace at least a portion of a patient's natural tibia.

35. The implant of Claim 34, wherein said second member is a bearing operable to permit articulation between a femoral component and said tibial component.

36. The implant of Claim 33, wherein said first member is fixed relative to said second member.

37. The implant of Claim 33, wherein said wear reduction device is a ceramic insert.

38. The implant of Claim 37, wherein said ceramic insert is at least one of zirconia and alumina.

39. The implant of Claim 33, wherein said wear reduction device is at least one of said first member and said second member having oxygen and nitrogen diffused within.

40. The implant of Claim 33, wherein said wear reduction device is at least one of said first member and said member having an oxide alloy.

41. The implant of Claim 40, wherein said oxidizable alloy is at least one of a titanium hafnium, a titanium zirconium, and a zirconium hafnium

42. The implant of Claim 33, wherein said wear reduction device is provided by at least one of said first member and said second member that is nitrided.

43. The implant of Claim 42, wherein at least one of said nitrided first member and said nitrided second member is provided by at least one of PVD coating, plasma source ion implantation, and ion nitriding.

44. The implant of Claim 33, wherein said wear reduction device is provided by at least one of said first member and said second member that is anodized.

45. The implant of Claim 44, wherein said wear reduction device is provided by at least one of said first member and said second member anodized using a conversion coating.

46. The implant of Claim 33, wherein said wear reduction device is provided by at least one of said first member and said second member that is burnished to provide a work hardened surface.

47. The implant of Claim 46, wherein at least one of said first member and said member is further treated with at least one of CO, CR, MO, and Ti-6-4.

48. The implant of Claim 33, wherein said first member is movable relative to said second member.